

Reproductive Health

NCERT Exemplar Solutions

Multiple Choice Questions (MCQs)

1. The method of directly injecting a sperm into ovum in assisted by reproductive technology is called

- (a) GIFT
- (b) ZIFT
- (c) ICSI
- (d) ET

Ans: (c) ICSI (Intra Cytoplasmic Sperm Injection)

2. Increased IMR and decreased MMR in a population will

- (a) cause rapid increase in growth rate
- (b) result in decline in growth rate
- (c) not cause significant change in growth rate
- (d) result in an explosive population/exp

Ans: (c) not cause significant change in growth rate

3. Intensely lactating mothers do not generally conceive due to the

- (a) suppression of gonadotropins
- (b) hypersecretion of gonadotropins
- (c) suppression of gametic transport
- (d) suppression of fertilisation

Ans: (a) suppression of gonadotropins

4. Sterilisation techniques are generally foolproof methods of contraception with least side effects. Yet, this is the last option for the couples because

I. it is almost irreversible.

II. of the misconception that it will reduce sexual urge/drive.

III. it is a surgical procedure.

IV. of lack of sufficient facilities in many parts of the country.

Choose the correct option

- (a) I and III
- (b) II and III
- (c) II and IV

(d) I, II, III and IV

Ans: (a) I and III

5. A national-level approach to build up a reproductively healthy society was taken up in our country in

(a) 1950s

(b) 1960s

(c) 1980s

(d) 1990s

Ans: (a) 1950s

6. Emergency contraceptives are effective if used within 72 hrs of

(a) coitus

(b) ovulation

(c) menstruation

(d) implantation

Ans: (a) coitus

7 Choose the right one among the statements given below.

(a) IUDs are generally inserted by the user herself.

(b) IUDs increase phagocytosis reaction in the uterus.

(c) IUDs suppress gametogenesis.

(d) IUDs once inserted need not be replaced.

Ans: (b) IUDs increase phagocytosis reaction in the uterus.

8. Following statements are given regarding MTP. Choose the correct options given below.

I. MTPs are generally advised during first trimester.

II. MTPs are used as a contraceptive method.

III. MTPs are always surgical.

IV. MTPs require the assistance of qualified medical personnel.

(a) II and III

(b) II and III

(c) I and IV

(d) I and II

Ans: (c) I and IV

9. From the sexually transmitted diseases mentioned below, identify the one which does not specifically affect the sex organs

- (a) Syphilis
- (b) AIDS
- (c) Gonorrhoea
- (d) Genital warts

Ans: (b) AIDS (Acquired Immuno Deficiency Syndrome)

10. Condoms are one of the most popular contraceptives because of the following reasons

- (a) these are effective barriers for insemination
- (b) they do not interfere with coital act
- (c) these help in reducing the risk of STDs
- (d) All of the above

Ans: (d) All of the above

11. Choose the correct statement regarding the ZIFT procedure.

- (a) Ova collected from a female donor are transferred to the Fallopian tube to facilitate zygote formation.
- (b) Zygote is collected from a female donor and transferred to the Fallopian tube
- (c) Zygote is collected from a female donor and transferred to the uterus
- (d) Ova collected from a female donor and transferred to the uterus

Ans: (b) Zygote is collected from a female donor and transferred to the Fallopian tube

12 The correct surgical procedure as a contraceptive method is

- (a) ovariectomy
- (b) hysterectomy
- (c) vasectomy
- (d) castration

Ans: (c) vasectomy

13 Diaphragms are contraceptive devices used by the females. Choose the correct option from the statements given below

I. They are introduced into the uterus.

II. They are placed to cover the cervical region.

III. They act as physical barriers for sperm entry.

IV. They act as spermicidal agents.

- (a) I and II
- (b) I and III
- (c) II and III
- (d) III and IV

Ans: (c) II and III

Very Short Answer Type Questions

1. Reproductive health refers only to healthy reproductive functions. Comment.

Ans: According to the World Health Organisation (WHO), reproductive health means a total well-being in all aspects of reproduction, i.e., physical, emotional, behavioural and social. Therefore, a society with people having physically and functionally normal reproductive organs and normal emotional and behavioural interactions among them in all sex-related aspects might be called reproductively healthy.

2. Comment on the reproductive and child healthcare programme of the government to improve the reproductive health of the people.

Ans: India was amongst the first countries in the world to initiate action plans and programmes at a national level to attain total reproductive health as a social goal. These programmes, called ‘family planning’, were initiated in 1951 and were periodically assessed over the past decades. Improved programmes covering wider reproductive-related areas are currently in operation under the popular name ‘Reproductive and Child Healthcare (RCH) programmes’.

Creating awareness among people about various reproductive-related aspects and providing facilities and support for building up a reproductively healthy society are the major tasks under these programmes.

3. The present population growth rate in India is alarming. Suggest ways to check it.

Ans: The present population growth rate in India is alarming. Such an alarming growth rate could lead to an absolute scarcity of even the basic requirements, i.e., food, shelter and clothing, in spite of significant progress made in those areas.

The following are some important ways to overcome this problem

- (i) By raising the marriageable age of females to 18 and that of males to 21 years.
- (ii) By promoting the use of birth control measures to motivate smaller

families.

- (iii) By providing incentives to couples with small families.
- (iv) By educating people about the consequences of uncontrolled population growth.

4. STDs can be considered as self-invited diseases. Comment.

Ans: Diseases or infections which are transmitted through sexual intercourse are collectively called Sexually Transmitted Diseases (STD) or Venereal Diseases (VD) or Reproductive Tract Infections (RTI).

Though all persons are vulnerable to these infections, their incidences are reported to be very high among persons in the age group of 15-24 years. STDs can be considered as self-invited diseases because one could be free of these infections by following the simple principles given below

- (i) Avoid sex with unknown partners/multiple partners.
- (ii) Always use condoms during coitus.
- (iii) In case of doubt, one should go to a qualified doctor for early detection and get complete treatment if diagnosed with the disease.

5. Suggest the reproduction-related aspects in which counselling should be provided at the school level.

Ans: In the following aspects, counselling should be provided at the school level

- (i) Introduction of sex education in school that helps in eradicating myths and misconceptions regarding sex-related aspects.
- (ii) Proper information about reproductive organs, safe and hygienic sexual practices and Sexually Transmitted Diseases (STDs).
- (iii) Awareness of problems due to uncontrolled population growth, social evils like sex abuse and sex-related crimes, etc.
- (iv) Educating people about available birth control options, care of pregnant mothers, post-natal care of mother and child, importance of breastfeeding, equal opportunities for the male and female child.

6. Mention the primary aim of the ‘Assisted Reproductive Technology’ (ART) programme.

Ans: ‘Assisted Reproductive Technology’ (ART) is the collection of certain special techniques. The primary aim of the ART programme is to assist infertile couples to have children through certain special techniques (like ZIFT, IUT, GIFT, ICSI, AI, etc.)

where corrective treatment is not possible.

7. What is the significance of the progesterone-estrogen combination as a contraceptive measure?

Ans: Progestogens or progestogen-estrogen combinations play an important role in contraception. They are used in the form of tablets or pills. They inhibit ovulation and hence implantation.

They are also used by females as injections or implants under the skin. Their mode of action is similar to that of pills, but their effective periods are longer.

8. Strict conditions are to be followed in Medical Termination of Pregnancy (MTP) procedures. Mention two reasons.

Ans: Strict conditions are to be followed in Medical Termination of Pregnancy (MTP) procedures due to the following two reasons

- (a) To get rid of unwanted pregnancies.
- (b) It is also essential when the foetus is suffering from an incurable disease or when continuation of the pregnancy could be harmful or even fatal to the mother and or foetus.

9. Males in whom testes fail to descend to the scrotum are generally infertile. Why?

Ans: Since the testes are very sensitive to temperature, if they do not descend into the scrotum before adolescence, then they will stop producing sperm, which will lead to infertility in males.

10. Mention two advantages of lactational amenorrhea as a contraceptive method.

Ans: The two advantages of lactational amenorrhea as a contraceptive method are mentioned below

- (i) If the mother is breastfeeding completely, she would not ovulate, so the chances of conception would be low.
- (ii) She would not need to use any pill or devices for birth control. So, there will be no side effects.

Short Answer Type Questions

1. Suggest some important steps that you would recommend to be taken to improve the reproductive health standards in India.

Ans: The Following measures need to be taken to improve the reproductive health standards in India

- (i) Providing infrastructural facilities and professional expertise to attain reproductive health.
- (ii) Educating people about birth control methods, care of pregnant mothers, importance of breastfeeding, safe and hygienic sexual practices and safeguard against STDs.
- (iii) Introduction of sex education in schools to give proper information to the young minds about sex-related aspects.
- (iv) Help of audio-visual and print media to create awareness among people about reproduction-related aspects.
- (v) Awareness of problems due to population explosion, social evils like sex abuse, and sex-related crimes.
- (vi) Statutory ban on amniocentesis to legally check female foeticides.

2. The procedure of GIFT involves the transfer of female gamete to the Fallopian tube. Can gametes be transferred to the uterus to achieve the same result?

Explain.

Ans: The procedure of GIFT involves the transfer of a female gamete to the Fallopian tube. Gametes cannot be transferred to the uterus to achieve the same result because the uterine environment is not congenial for the survival of the gamete.

If directly transferred to the uterus, they will undergo degeneration or could be phagocytosed and hence, a viable zygote would not be formed.

3. Copper ion-releasing IUDs are more efficient than non-medicated methods.

Why?

Ans: Intra Uterine Devices (IUDs) are inserted in the uterus through the vagina and are presently available as the non-medicated IUDs, copper-releasing IUDs and hormone-releasing IUDs. Cu ion-releasing IUDs are more efficient methods because

- (i) Cu ions released suppress sperm motility and the fertilising capacity of sperm.
- (ii) It increases phagocytosis of sperm within the uterus.

- (iii) It is one of the safest, most effective, convenient and least expensive reversible contraceptives available.
- (iv) It has no systemic effects and can be safely used by breastfeeding women.

4. What are the probable factors that contributed to population explosion in India?

Ans: The Following are some factors that have probably contributed to the population explosion in India

- (i) Ignorance and a complete lack of awareness about the ill effects of an increasing population, especially in rural regions.
- (ii) Poverty and illiteracy
- (iii) Social stigmas about the girl child and the desire to have a boy child.
- (iv) Decline in death rate.
- (v) Decline in maternal and infant mortality rates.
- (vi) Increase in the young, reproductive age population.

5. Briefly explain IVF and ET. What are the conditions in which these methods are advised?

Ans: IVF refers to in vitro fertilisation, and ET refers to embryo transfer. Gametes from the male and female are collected hygienically and induced to fuse in the laboratory set-up under simulated conditions.

The zygote formed is collected and is introduced into the uterus of a host or surrogate mother at an appropriate time (secretory phase). Early embryos (up to 8 cells) are generally transferred to the Fallopian tube, whereas embryos with more than 8 cells are transferred to the uterus.

6. What are the advantages of natural methods of contraception over artificial methods?

Ans: As no medicines or devices are used in these methods, side effects are almost nil. However, the chances of failure of these methods are also high.

7. What are the conditions in which medical termination of pregnancy is advised?

Ans: Medical termination of pregnancy is carried out to get rid of unwanted pregnancies. It is also essential when the foetus is suffering from an incurable disease or when continuation of the pregnancy could be harmful or even fatal to the mother and/or foetus.

8. Comment on the essential features required for an ideal contraceptive.

Ans: An ideal contraceptive should

- (i) be easily available
- (ii) effective and reversible with the least or no side effects
- (iii) no interference with the sexual drive/desire or the sexual act of the user
- (iv) be user-friendly

9. All reproductive tract infections RTIs are STDs, but all STDs are not RTIs. Justify with example.

Ans: Among the common STDs, hepatitis B and AIDS are not infections of the reproductive organs, though their mode of transmission could be through sexual contact. All other diseases, like gonorrhoea, syphilis, genital herpes, and hepatitis B, are transmitted through sexual contact and are also infections of the reproductive tract, so there are STDs and RTIs, whereas AIDS and hepatitis are STDs but not RTIs.

Long Answer Type Questions

1. What are the assisted reproductive techniques practised to help infertile couples? Describe any three techniques.

Ans: ART techniques are described as follows

- (i) Test-tube Baby Programmes. In this method, ova from the wife/donor (female) and the sperm from the husband/donor (male) are collected and are induced to form a zygote under simulated conditions in the laboratory. This process is called In Vitro Fertilisation (IVF). The zygote or early embryo with up to 8 blastomeres is transferred into the Fallopian tube (process is called Zygote Intra Fallopian Transfer or ZIFT), and an embryo with more than 8 blastomeres is transferred into the uterus (the process is called Intra Uterine Transfer or IUT). In females who cannot conceive, embryos formed by the fusion of gametes (called in vivo fertilisation) are transferred into the female.
- (ii) Gamete Intra Fallopian Transfer (GIFT) It is the transfer of an ovum collected from a donor into the Fallopian tube of another female who cannot produce one, but can provide a suitable environment for fertilisation and further development of the embryo.
- (iii) Artificial Insemination (AI) In this method, the semen is collected either from the husband or a healthy donor is artificially introduced into the vagina or

into the uterus (Intra Uterine Insemination or IUI). This technique is used in cases where the male is unable to inseminate sperm in the female reproductive tract, or due to very low sperm counts in the ejaculation.

2. Discuss the mode of action and advantages/disadvantages of hormonal contraceptives.

Ans: Intra-Uterine Devices are presently available as

- (a) Non-medicated IUDs (e.g., Lippes loop).
- (b) Copper-releasing IUDs (e.g., Cu-T, Cu-7, Multiload 375).
- (c) Hormone-releasing IUDs (e.g., Progestasert, LNG-20).

Mode of Action of Hormonal Contraceptives

The hormones released by IUDs make the uterus unsuitable for implantation and the cervix hostile to sperm. Progesterone can also be used as injections and implants (slow release of hormones) to inhibit ovulation.

Advantages of Hormonal Contraceptives

Administration of progestogens or progestogen-oestrogen combinations or IUDs within 72 hrs of intercourse is effective as an emergency contraceptive, as they could be used to avoid possible pregnancy due to rape or casual unprotected intercourse.

Disadvantages of Hormonal Contraceptives

- (i) IUDs are suggested as ideal contraceptives for females, but they can have serious side effects.
- (ii) Can cause an allergic reaction.
- (iii) If displaced, it can cause tissue damage and profuse bleeding.
- (iv) IUDs can damage the normal hormonal balance, and later, even if desired, pregnancy may not be achieved.
- (v) Artificial intake can disrupt normal hormonal interactions in the body system.

3. STDs are a threat to reproductive health. Describe any two such diseases and suggest preventive measures.

Ans: Diseases or infections which are transmitted through sexual intercourse are collectively called Sexually Transmitted Diseases (STDs) or Venereal Diseases (VD) or Reproductive Tract Infections (RTI).

Though all persons are vulnerable to these infections, their incidences are reported to be very high among persons in the age group of 15-24 years. STDs can be considered self-inflicted diseases.

STDs include gonorrhoea, syphilis, genital herpes, chlamydia, genital warts, trichomoniasis, hepatitis B, and HIV. These diseases may cause some complications Pelvic Inflammatory Diseases (PID), abortions, still births, ectopic pregnancies, infertility, or even cancer of the reproductive tract.

Hepatitis B and HIV are such diseases that get transmitted in the following ways, besides sexual contact

- (i) Sharing of injection needles or surgical instruments with infected persons.
- (ii) Transfusion of infected blood.
- (iii) Transfer from the infected mother to the foetus through the placenta.

Preventive Measures

By following simple principles, STDs can be prevented

- (i) Avoid sex with unknown partners/multiple partners.
- (ii) Always use condoms during coitus.
- (iii) Contact a qualified doctor for any doubt in the early stage of infection.

4. Do you justify the statutory ban on amniocentesis in our country? Give reasons.

Ans: Yes, the ban is necessary because amniocentesis is misused nowadays. It is used to determine the sex of the foetus, and in many cases, it leads to female foeticide. It became so serious that it disturbed the male-female ratio, which can harm society. The test is actually meant to determine the genetic defects or metabolic disorders in fetus by doing a chromosomal analysis. In such extreme cases that would be incurable, a decision to abort the foetus could be taken.

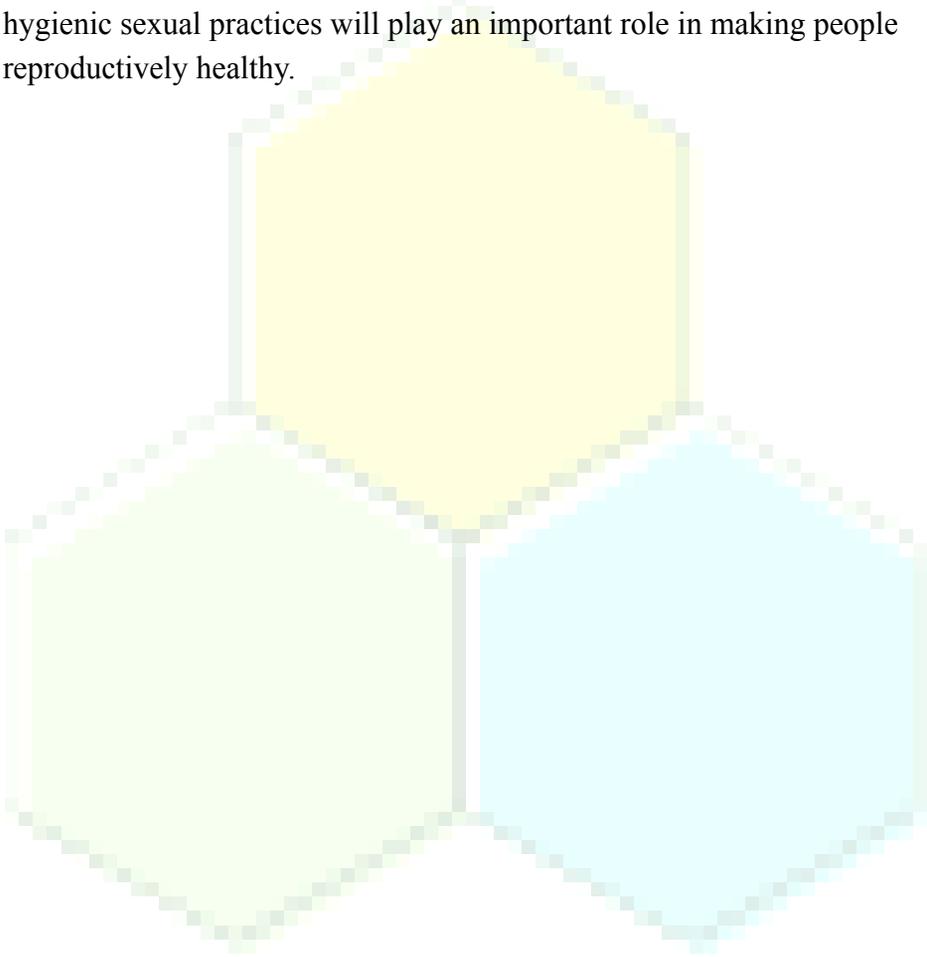
5. Enumerate and describe any five reasons for introducing sex education to school-going children.

Ans: The reasons for introducing sex education to school-going children are as follows

- (i) At the school level, children from the age group 12 and above should be counselled on the reproductive system, processes and practices and the importance of safe and responsible sex.
- (ii) Sex related issues and problems like adolescent changes, menstrual cycle, menstrual problems, unwanted pregnancy, unsafe abortion, reproductive tract infections (STDs) and cancers.
- (iii) They should know about body changes during their age and be taught about healthy habits, including personal cleanliness and hygiene.
- (iv) Students should become part of such education, so that they overcome

hesitation and gain confidence to discuss any query with their teacher or parents.

- (v) Counselling and awareness regarding reproductive organs, safe and hygienic sexual practices will play an important role in making people reproductively healthy.



BioSmartNotes